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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,312	08/07/2001	Kazuhiko Hara	448563/0198	5235

7590

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 05/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/924,312

Applicant(s)
HARA ET AL.

Examiner
ANH VO

Art Unit
2861



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 8, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-28 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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NON-FINAL REJECTION

Response to Applicant's Amendment

The rejections over Shinada et al. (US Pat. 5,790,158), Yamamoto (US Pat. 5,482,660) and Hoisington et al (US Pat. 4,14,786) are withdrawn in view of the arguments presented in the amendment.

Claims Rejections

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 16 is rejected under 35 U.S.C. 102 (a) as being anticipated by Hideaki (JP410258517A).

Hideaki discloses in Figures 1-7 an ink cartridge comprising:

- an ink cartridge (2);
- a plant (56);
- wherein the injected ink into the cartridge (2) is heated up to 40-50 degrees C for allowing the injected ink flowing into the porous member uniformly.

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Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 and 20-28 rejected under 35 U.S.C. 103 (a) as being unpatentable over Shinada et al. (US Pat. 5,790,158) in view of Fuji Electric (JP0315660).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Shinada et al. disclose in Figures 1-2, 5, and 15a-15b an ink cartridge for use in an ink jet printer comprising:

- a container body (501) providing having a first wall and a plurality of walls extending upwardly therefrom to define an opening spaced from the bottom wall on a pallet, the container body (501) including a chamber (511) for accommodating a porous member (520) therein, and an ink supply port (513), having an inlet formed in the bottom surface of the chamber and an outlet (Figures 15a-15b);
- a packing member (530) inserting into the ink supply port (513) and then sealing the ink supply port outlet (Figures 15a-15b);
- a porous member (520) inserting into the foam chamber (511);

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- a cover (516) bonding to the opening of the container body (501);
- ink injecting into the foam chamber (520);
- a filter (525) affixing to the ink supply port inlet.
- the ink being loaded to approximately 200 mm Hg below atmospheric pressure (column 6, lines 42-49)
- the container body inserting into a bag having an opening and sealing the bag opening in a vacuum environment (column 6, lines 49-67).

However, Shinada et al. do not disclose that at least a portion of the ink port is treated with ultraviolet radiation to improve the wettability of the treated portion and the cartridge is depressurized a second time.

Nevertheless, the Fuji Electric reference teaches 1-2 an ink jet printer comprising a base (1) and a diaphragm (2) which are radiated by ultraviolet rays for improving the wettability with ink.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Fuji Electric in the Shinada et al. ink jet printer for the purpose of improving the ink wettability. Also, as notoriously well known in the art, the ink cartridge is depressured for the purpose of removing air and providing a predetermined pressure for refilled ink before the ink container of the ink cartridge is sealed. Thus, depressuring the ink cartridge of Shinada et al a second time for resetting the final pressure of the refilled ink is a common practice for an engineer. It would have been obvious to a person having skill in the art at the time the invention was made to depressure the ink cartridge of Shinada et al a second time for the purpose of resetting the final pressure for the ink cartridge.

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Claims 17-19 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Hideaki (JP1025851).

Hideaki discloses an ink cartridge with all of the limitations of the claimed invention as discussed above but does not disclose that the ink is heated up to or over 20 degrees C.

However, as notoriously well known in the art, the heating temperature of ink is selectable to accommodate with the size of the cartridge for preventing the porous member from sucking air. Thus, selecting the heating temperature is a common practice for an engineer and is considered to be a matter of a design expedient. It would have been obvious to a person having skill in the art at the time the invention was made to select the heating temperature at or over 20 degrees C for the purpose of accommodating with the size of the cartridge and the material type of the porous member. Also, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Abler*, 105 USPO 233.

Response to Applicant's Arguments

The applicant argues that Yamamoto does not suggest changing the wettability of the supply port. The argument is persuasive. However, this limitation is suggested in the Fuji Electric reference as discussed above, where in the base (1) for containing ink is radiated by ultraviolet rays for improve the wettability.

The applicant argues that the ink of Hoisington is the hot melted ink. The argument is moot. However, the injected ink being heated is disclosed in the Hideaki reference.

The applicant argues that Shinada does not disclose the step of "depressurizing the ink cartridge at second time". The argument is not persuasive because depressuring the ink cartridge

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for a second time for the purpose of resetting the final pressure of the refilled ink is considered to be a common practice and would have been obvious to a person having ordinary skill in the art.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner An Vo. whose telephone number is (703) 305-8194. The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 6:00 P.M.. The fax number of this Group 2800 is (703) 305-3431 or 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



ANH T.N. VO
PRIMARY EXAMINER

April 30, 2002